

GOOD PRACTICE EXAMPLE

FORTUNA S.R.L.



1. General Description

S.C. PRODUCȚIE FORTUNA S.R.L. is a local company located in Covasna, Centru Region Romania, which was established back in 1994. Currently it operates on the Romanian forest biomass market. Initially, it started to operate in timber harvesting, and, after that it extended its activities in wood processing. All the harvested wood is procured locally and all the processed wood results from own harvesting operations. The company harvests, transports and processes about 10,000 m³ yearly. Beside firewood and wood briquettes, it produces also woodchips. High quality wood is processed for furniture and constructions. Most of the firewood is sold on the local market while woodchips are used for own energetic consumption in heating the drying facilities and other administrative-productive spaces.



Fig. 1. Reduced quality timber used for wood chips production

2. A Good Practice Example

According to its activity domain, S.C. PRODUCȚIE FORTUNA S.R.L. is the workplace for a number of 50 highly trained employees which were locally recruited. The company assures periodical trainings for professional and work safety security. For this purpose, it signed a training contract with a specialized firm for work safety and security. The employed personnel is periodically extended, mostly by hiring young people (more than half of the employees are under 35). The company is involved in social and regional development projects, one of them referring to investments in a touristic resort which was developed locally. Because it is involved in most of the processes for forest biomass production, it also offers reduced prices for firewood for local population by comparison with the currently practiced prices in region. Each process is accompanied by relevant ICT technologies, starting with cost monitoring and optimization and ending with wood and suppliers-customers tracking.

In order to optimise its own supply chain S.C. PRODUCȚIE FORTUNA S.R.L. invested great amounts for procuring state-of-art machines, equipments and technologies such as: lumber dryers, heating boilers (woodchips and sawdust), lumber processing machines, numerical control machines, solving this way integral use of harvested forest biomass.



Fig. 2. Facility for lumber processing

Further investments will target the acquisition of a high capacity chipper and a performat pelletizing line.



Fig. 3. Facility for wood chips production

3. Who Is Involved?

S.C. PRODUCȚIE FORTUNA S.R.L. complies with the national legislation regarding timber harvesting, processing and selling. This means that it is an A.S.F.O.R. certified member. Wood to be harvested is bought from local Forest Administration (Covasna), and the resulted firewood is sold on the local market. Other biomass products such as wood briquettes are sold on the Romanian market. The company's harvesting and processing activities are periodically supervised by the Regional Forest Inspectorate and other relevant authorities according to the current legislation.



Fig. 4. Stacked wood assortments for production of fire wood

The company possesses all the certificates, authorizations and licences needed when dealing with timber harvesting, transport, processing and manufacturing.

4. Technology

Covering several processes, S.C. PRODUCȚIE FORTUNA S.R.L. owns machines and equipments for all the processes starting from timber harvesting and ending with wood processing. Also, most of the processes are assisted by information and communication technology fact which is enabled by the work of a computer programmer which is employed by the company.

Harvesting

Timber harvesting is done using traditional harvesting systems such as associations between skidders and chainsaws. Currently the company owns four new Romanian skidders and five chainsaws.

Transporting

All the harvested wood is transported by the means of own equipment to the own processing plant. For this purpose the company invested in 2 modern truck-trains. Processed wood products are transported also to the customers by its own means, with a specialised vehicle.



Fig. 5. Truck used for transportation of processed wood products



Fig. 6. Production facilities of wood products

Wood Processing

Firewood results only from the poor quality wood and from wood processing residues when the last ones are not converted in woodchips.

5. Investments and Logistics

Covering several processes, the company invested great amounts in technology and equipment. For timber harvesting, investments are:

- 4 skidders. 120000 euro;
- 10 chainsaws 5600 euro.

Transport of harvested timber from forest to the processing plant is done using two MAN made trucks (investment of 300000 euro). Processed wood products are transported to the customers using a specialized truck (investment of 140000 euro).

Since the activity of S.C. PRODUCȚIE FORTUNA S.R.L. involves wood processing, important investment efforts were done in this direction:

- sawmill (including all the afferent constructions and assemblies) 100000 euro;
- lumber drying facility 100000 euro;
- multiblade cutting machine 30000 euro;
- processing machine. 140000 euro;
- numerical control machine for wood processing. . . 40000 euro;
- welding press. 40000 euro;
- wood chipper. 40000 euro;
- briquetting machine 15000 euro;
- thermic boiler (1200 kW, including the installation) 100000 euro;
- all the constructions from the production platform (offices, production facilities etc.), including all the taxes and engineering studies . . . 400000 euro.

6. Prices and Quantities of Produced Firewood

All the biomass products processed by S.C. PRODUCȚIE FORTUNA S.R.L. are sold in Romania. Fire wood is sold to the local community while wood briquettes are sold to other Romanian customers. The average annual production of wood briquettes is of about 400 tons which are sold to an average price of 89 euro per ton. Firewood results form poor quality wood as well as from processing activities. The average annual produced quantity is about 1400 tons while the average selling price is of 17 euro per stere (about 24 euro per ton). These prices are considerably low by comparison with the price of firewood on the local market.

7. Environment Protection and Local Development

By integral use of harvested wood, which includes the utilization of wood processing residues, important CO₂ and money savings are attained by S.C. PRODUCȚIE FORTUNA S.R.L.. Conventional solution

of heating using fossil fuels was replaced by a heating solution on sawdust and wood chips. This solution assures the energy needed for lumber drying and heating the production and administration facilities.

Starting with 2013 S.C. PRODUCȚIE FORTUNA S.R.L. will invest in a modern pelletizing line as well as in a high capacity wood chipper. This will result in extending the employed personnel.



Fig. 7. Storage area for lumber and raw resource timber

8. Formal and Informal Stakeholders Networks

S.C. PRODUCȚIE FORTUNA S.R.L. owns a membership in A.S.F.O.R. (Romanian Association of Timber Harvesting and Processing Companies). It collaborates mainly with Covasna Regional Forest Administration from where it procures timber for harvesting and processing. Most of the firewood is sold locally.

9. Polyfunctionality - A Key for Success

The investments made in polyfunctional equipments enabled the production orientation to several biomass products. This assured the integral use of harvested wood as well as reduced prices for fire wood for local population.